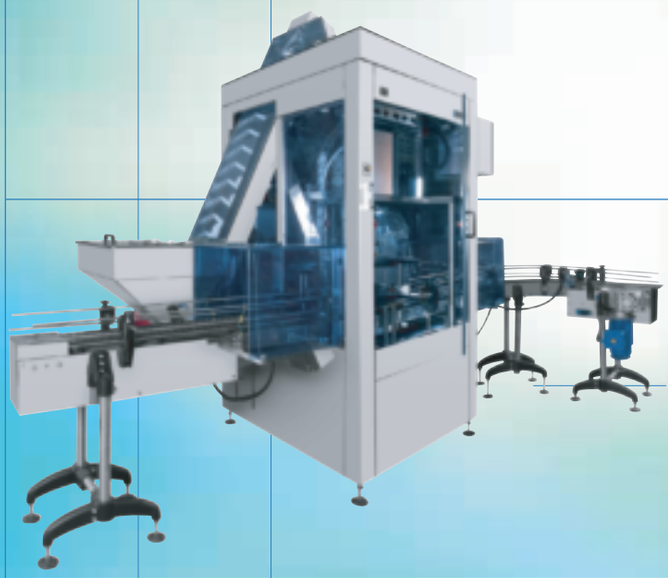
Adelphi Masterfil

Filling and Capping Machines



Complete Line Solutions and Turnkey Projects

Company Overview

Masterfil® was founded in 1980 and acquired by the Adelphi Group of Companies in 2007. It is located at the group headquarters in Haywards Heath near Gatwick Airport. The company specialises in volumetric, flowmeter and weigh filling with associated single and rotary head capping machines. Masterfil has gained a reputation for robustness, build quality and accuracy of fill, with machines used worldwide and extensively in the Oil, Agrochemical, Cosmetic and Food applications.

Filling machines can be supplied with 2 to 12 filling heads and can fill up to 4300 x 5 litre containers per hour accurate to ±0.2%. Machines can fill volumes down to 100ml. Semi-automatic versions are available single or double action.

Masterap® single head in-line indexing and rotary 3 or 4 head capping machines are designed to work with the fillers and have maximum outputs of 60 to 140 caps per minute respectively.

A variety of in-line and end-of-line accessories are also available.

Masterfil® Masterap®

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Filling Machines

Capping Machines

Automatic Filling

Multifil Automatic Volumetric

Masterfil has a range of 4 heavy duty frames, sized for growth, which can accommodate 2 to 12 filling heads (extra heads can be added to match increased output requirements). There is also a light weight frame that can carry 1 to 4 heads dependent on the size of the containers. The Multifil filling heads offer a wide range of fill volumes and can handle high to low viscosity liquid. The nozzles are adjustable to fill foaming and non-foaming products with multiple speed filling capacity.
The honed 316L stainless steel filling pumps are available in 1, 3, 5 or 6 litre capacities.

- Pneumatically powered PLC controlled automatic in-line filler.
- Single or double action multiple heads.
- Accurate to ±0.2%.
- Multiple speed filling.
- Quick and easy to clean.
- Totally enclosed 304 stainless steel filling cabinet.
- 316L stainless steel / PTFE contact parts.
- Pharmaceutical grade stainless steel box section conveyor with variable speed control.
- Nozzles can be programmed to dive and rise whilst filling or fill into neck, depending on product.
- Fully automatic container handling system includes 'no container, no fill' sensing.
- Quick change of volume with digital readout.
- Flushing circuit for in-place cleaning (optional).

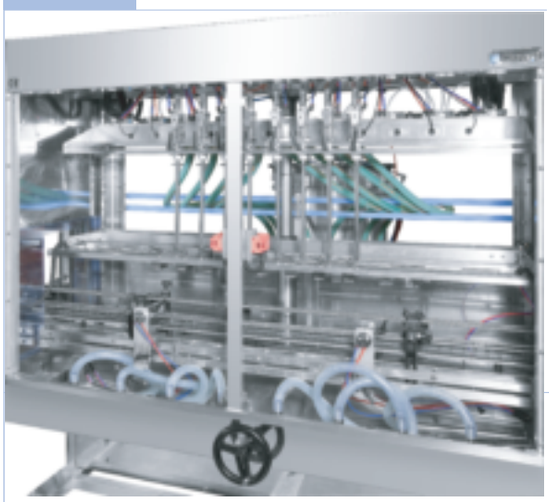
Technical Details

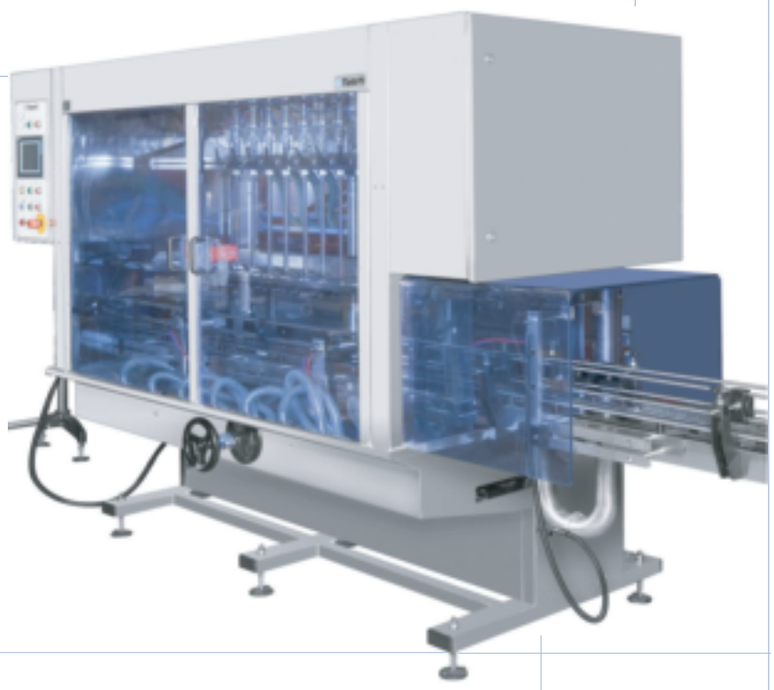
Accuracy	±0.2%
Output (approx per hour)	Up to 4300
Height (approx)	2.3m nominal (plus stand if required)
Depth (approx)	2.3m nominal
Width (approx)	1.2/1.6/2/2.4/3m
Weight (approx)	1640kg
Working Pressure	6 bar (0.6Mpa)
Air Consumption (single drive/twin drive)	230/420 litres per cycle
Volume Range	250ml – 6000ml
Electricity Supply	380/420v

Multifil Automatic Flowmeter

Multifil Automatic Flowmeter

Masterfil mass or magnetic flow liquid filling machines provide great flexibility, quick product changeover times and ease of cleaning with a choice of 4 to 12 filling heads.





Liquid passes through a mass or magnetic flowmeter located before the filling nozzle, providing an accurate measure of the liquid. Optimum output is achieved by key pad controls and variable filling speeds.

The range of nozzle types ensure efficient splash-free filling of liquids and a wide choice of sizes enables fast production outputs. With no pistons to clean, changeover time is greatly reduced and the need for cleaning effluent is minimised. The machine takes liquid directly from a pressure pump or gravity feed into the container to be filled without being measured in a volumetric cylinder.

Optional touch-screen programming and the ability to store up to 50 filling profiles, with 4 fill speeds, has greatly increased the efficiencies on line throughputs. Easy recall of container fill profiles has helped to de-skill the operating of the range.

- Minimum down time between liquid and container changeover.
- Ability to fill a wide range of container sizes.
- Quick and easy to clean.
- Accurate to ±0.2%.
- Totally enclosed 304 stainless steel filling cabinet.
- Variable fill speeds can be used during a filling cycle.
- Pharmaceutical grade stainless steel box section conveyor with variable speed control.
- Nozzles can be programmed to dive and rise whilst filling or fill into neck, depending on product type.
- Pneumatically powered PLC controlled automatic in-line filler.
- Fully automatic container handling system includes 'no container, no fill' sensing.
- Quick change of volume with digital readout.
- Flushing circuit for in-place cleaning (optional).

Technical Details

Accuracy	±0.2%
Output (approx per hour)	Up to 4300
Height (approx)	2.3m nominal (plus stand if required)
Depth (approx)	2.3m nominal
Width (approx)	1.2/1.6/2/2.4/3m
Weight (approx)	785 kg
Working Pressure	6 bar (0.6Mpa)
Air Consumption	10 litres per cycle
Volume Range	250ml-20 litres
Electricity Supply	240v

Semi-Automatic Filling

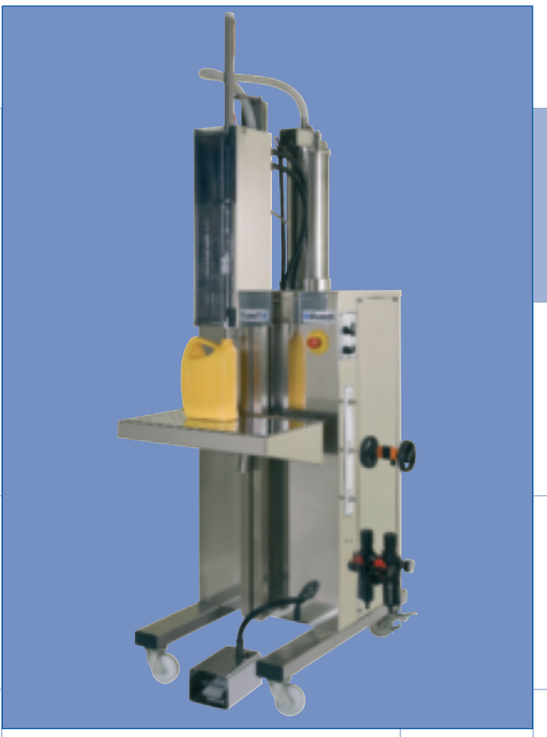
These machines are simple filling systems used for volumes up to 5 litres with 1 or 2 nozzles. The container is hand placed and removed. The unit can have a gravity or powered feed through conveyor and can be linked to a Mastercap capping unit.

Volumetric Filling

- Able to fill a wide range of container sizes.
- Accurate to ±0.2%.
- Quick and easy to clean.
- 316L stainless steel / PTFE contact parts.
- Variable fill speed can be used during a filling cycle.
- Nozzles can be programmed to dive and rise whilst filling or fill into neck, depending on product type.
- Single or double action multiple heads.
- Flushing circuit for in-place cleaning (optional).

Technical Details

	1 litre filler	5 litre filler
Accuracy	±0.2%	±0.2%
Output (approx)	10 per min	6 per min
Height (approx)	2.2m	1.8m
Depth (approx)	1.8m	1.8m
Width (approx)	0.7m	0.7m
Weight (approx)	150kg	179kg
Working Pressure	6 bar (0.6Mpa)	6 bar (0.6Mpa)
Air Consumption	55 litres per cycle	55 litres per cycle
Volume Range	200ml-1 litre	500ml-5 litre
Electricity Supply	240v	240v



Semi-Automatic Volumetric 5 litre filler.

Flowmeter Filling

- Able to fill a wide range of container sizes.
- Accurate to ±0.2%.
- Quick and easy to clean.
- 316L stainless steel / PTFE contact parts.
- Variable fill speeds can be used during the filling cycle.
- Nozzles can be programmed to dive and rise whilst filling or fill into neck, depending on product type.
- Optimum output is achieved by key pad controls and with no pistons to clean, changeover time is reduced.
- Minimum down time between liquid and container changeovers.

Technical Details

	1 litre filler	5 litre filler
Accuracy	±0.2%	±0.2%
Output (approx)	10 per min	6 per min
Height (approx)	2.2m	2.2m
Depth (approx)	1.8m	1.8m
Width (approx)	0.7m	0.7m
Weight (approx)	150kg	179kg
Working Pressure	6 bar (0.6Mpa)	6 bar (0.6Mpa)
Air Consumption	5 litres per cycle	5 litres per cycle
Volume Range	200ml-1 litre	500ml-5 litre
Electricity Supply	240v	240v

Semi-Automatic Flowmeter

Weigh Scale Filling

The weigh filling machines cover a range of fills from 1 litre to 210 litres and above if required. Fill accuracies comply with DOT weights and measure requirements (DTI Certification No 2001/15). Masterfil are able to integrate with various weighing systems including electronics and electro-pneumatics. Equipment is suitable for washdown, hazardous or other hostile environments.

- 316L stainless steel / PTFE contact parts.
- Quick and easy to clean.
- 'No drum, no fill'.
- Bulk and trickle fill speeds.
- Non-drip cut off nozzle.
- Quick changeover.
- Automatic tare check to verify correct drum size.
- Bung alignment protections.
- Interlock to prevent premature rise of filling head.
- Bottom fill, rise-whilst-fill, above bung and bung entry filling.
- Flushing circuit for in-place cleaning (optional).

Semi-Automatic Weigh Scale Filler - Bench Height

Semi-Automatic Weigh Scale Filler - Bench Height

The required weight is entered into the weigh scale control panel using the digital indicator. The container is hand placed onto the weigh scale platform and tared. Pressing the button activates the filling cycle. Liquid is filled in a controlled manner, with a diving shut off nozzle at a fast or slow speed until the pre-programmed target weight is reached.

Technical Details

Accuracy	±0.2%
Output (approx)	6 per min
Height (approx)	2.2m
Depth (approx)	1.8m
Width (approx)	1.2m
Weight (approx)	181kg
Working Pressure	6 bar (0.6Mpa)
Air Consumption	5 litres per cycle
Volume Range	1-25kg nominal
Electricity Supply	240v

Weigh Scale Drum/Pail Filler - Floor Mounted

The required weight is entered into the weigh scale control panel with a digital indicator. The container is placed onto the weigh scale platform and tared. Pressing the button activates the filling cycle. Liquid is filled in a controlled manner, with a diving shut off nozzle at a fast or slow speed until the pre-programmed target weight is reached.

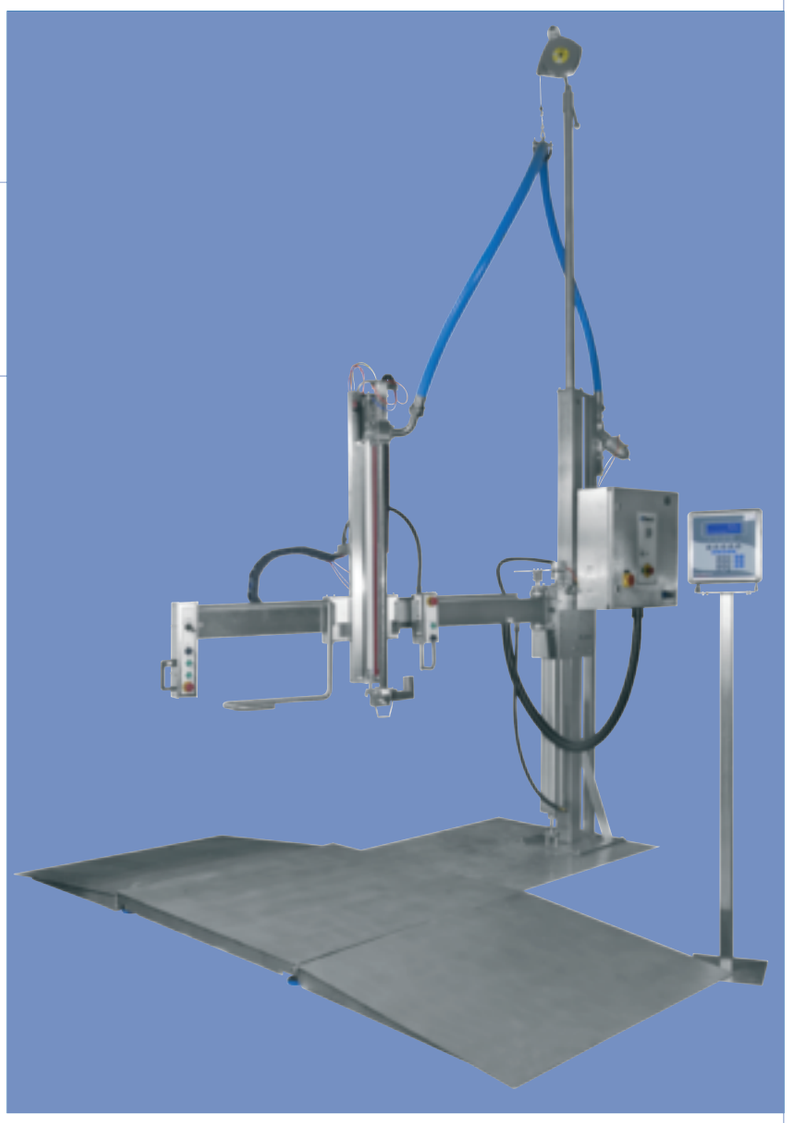
Technical Details

Accuracy	±0.2%
Output	Dependent on application
Height (approx)	2.4m
Depth (approx)	1.4m
Width (approx)	0.6m
Working Pressure	6 bar (0.6Mpa)
Air Consumption	10 litres per cycle
Volume Range	10-1000 litres
Electricity Supply	240v

Boom Filling

Weigh Scale or Flowmeter

Designed for a variety of volumes including 10 litre, 25 litre and 205 litre drums, these fillers can also fill smaller containers as a back-up to other machines.



Flowmeter Boom Filler illustrated

Weigh Scale Boom Fillers

The required weight is entered into the weigh scale control panel with a digital indicator. The stackable container or containers are placed onto the weigh scale platform and tared. The filling nozzle is attached to a swinging boom arm, which is also height adjustable. Pressing the button activates the filling cycle and liquid is filled in a controlled manner at a fast or slow speed until the pre-programmed target point is reached.

Technical Details

Accuracy	±0.2%
Output	Dependent on application
Height (approx)	3.1m
Depth (approx)	3.1m
Width (approx)	1.2m
Working Pressure	6 bar (0.6Mpa)
Air Consumption	30 litres per cycle
Volume Range	20-1000 litres
Electricity Supply	240v

The stackable container or containers are placed on a pallet. The filling nozzle is attached to a swinging boom arm which is also height adjustable. A container is placed onto the machine platform and the required volume is entered into the batch control unit. Pressing the button activates the filling cycle and the nozzle descends into the container filling in a fast or slow pre-programmed manner. With no pistons to clean, changeover time is greatly reduced and the need for cleaning effluent is minimised. The machine takes liquid directly from a pressure pump or gravity feed into the container to be filled without being measured in a volumetric cylinder.

Technical Details

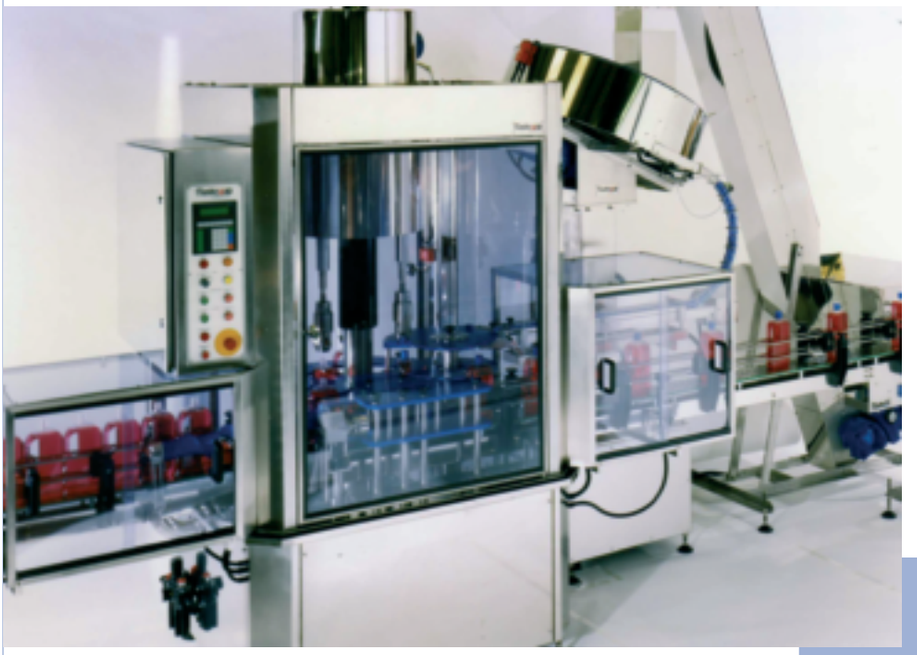
Accuracy	±0.2%
Output	Dependent on application
Height (approx)	3.1m
Depth (approx)	3.1m
Width (approx)	1.2m
Working Pressure	6 bar (0.6Mpa)
Air Consumption	30 litres per cycle
Volume Range	10-1000 litres
Electricity Supply	240v

Capping Machines

Rotary 3 or 4 Head Indexing Capping Machine

Mastercap rotary capper offers flexibility, robustness, reliability and speed to meet a range of applications. It is this impressive combination of attributes which has met demanding pan-industry production requirements, particularly important in Toiletry, Lube Oil, Chemical and Household product filling lines where speed is top priority.

The rotary cappers can withstand the harshest of production environments to provide a fast, robust and reliable solution to virtually any capping requirement.



Rotary Head Capping Machine

Capable of up to 140 caps per hour, the rotary cappers are designed to handle a wide range of caps including:

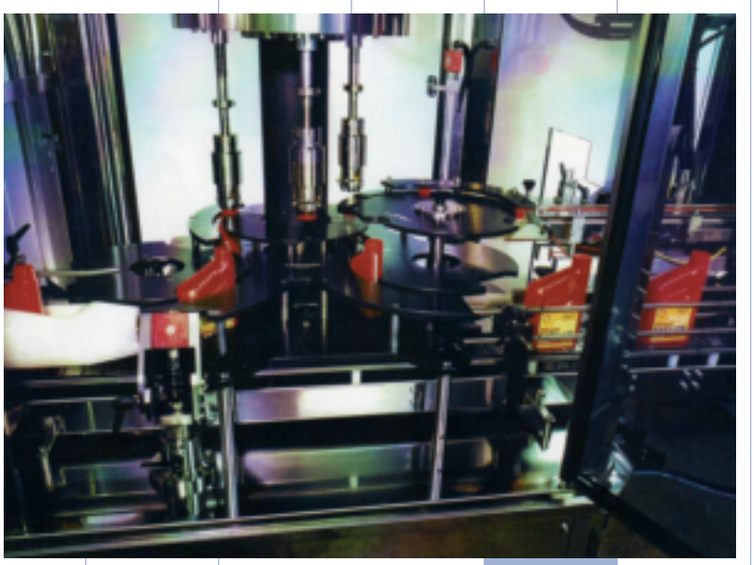
- Screw caps.
- Press on caps.
- Tamper proof caps.
- Aerosol overcaps.
- Inserts.

Changeovers between cap styles and sizes are made quick and easy by innovative features including:

- Push button height adjustment of capping heads.
- Colour coded change parts.
- Programmable control systems.

Technical Details

Cap Range	20 - 80mm
Output	140 containers per minute
Height (approx)	2.4 - 2.6m
Depth (approx)	1.1 - 1.5m
Width (approx)	2.6m
Working Pressure	6 bar (0.6Mpa)
Electricity Supply	3ph+n



- 3 or 4 capping heads.
- Screw capping chucks with magnetic clutch.
- Press-on caps.
- Push button height adjustment of capping heads.
- Cap feed conveyor and cap unscramble.
- Touch-screen speed controls.
- Capping zone protected by interlocked guards.
- Cap feed elevator to disk feeder.
- Pharmaceutical specification conveyor.
- 304 stainless steel machine cabinet.

Options

- Programmable control systems.
- Missing cap detector with cap rejects.

Capping Machines

Single Head Indexing Capping Machine

Mastercap single head indexing capper incorporates a host of innovative features. Providing a reliable , versatile, capping operation at speeds of up to 60 caps per minute.

The Mastercap single head indexing capper comes with an elevator cap feeder and 304 stainless steel cladding as standard.

- Easily adjustable variable torque by magnetic clutch.
- 4 or 8 pocket starwheel.
- No container, no cap and queue sensing.
- Push button height adjustable.
- Full integration of filler and capper.
- Cap track low level detection.
- Speeds of up to 60 per minute.

Options

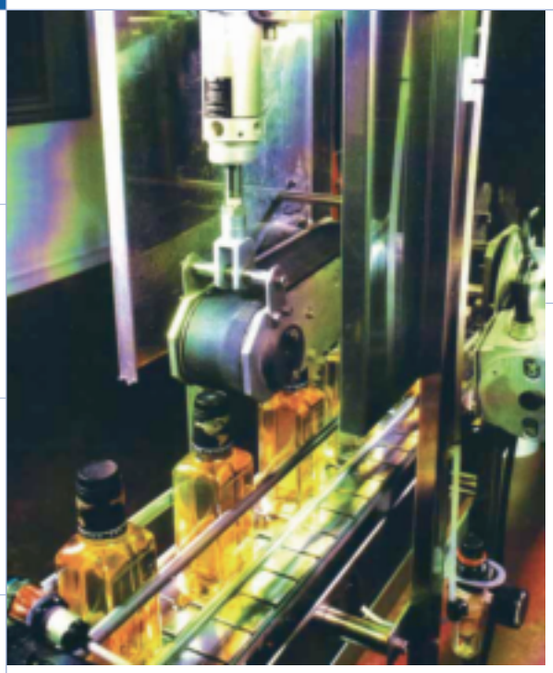
- Programable control system.
- Hazardous area control system.
- Missing cap detector.
- 'No foil' detection and cap reject.

Single Head Capping Machine

Technical Details

Cap Range	20-80mm
Output	60 containers per minute
Height (approx)	2.4 - 2.8m
Depth (approx)	1.3m
Width (approx)	2.3m
Weight (approx)	650 kg
Working Pressure	6 bar (0.6Mpa)
Electricity Supply	3ph+n

Capping Machines



Lid Presser

Lid Presser

Lids or caps are hand placed onto the containers. The containers then pass under the belt driven pressing band, pressing the lids into place. The speeds can be varied to suit the feed conveyor.

Semi-Automatic Capping Machine

Lids or caps are hand placed onto the containers. The containers then travel on a conveyor until they reach the gateway. A capping head then descends and tightens the cap to a pre-determined level of torque. The head then rises and the now capped container continues down the line.

Complete Lines

Complete Lines

Adelphi Masterfil has extensive knowledge and experience installing and commissioning complete line solutions across a range of industries. We have successfully installed lines around the world, with most recent additions including Egypt, Nigeria and India.

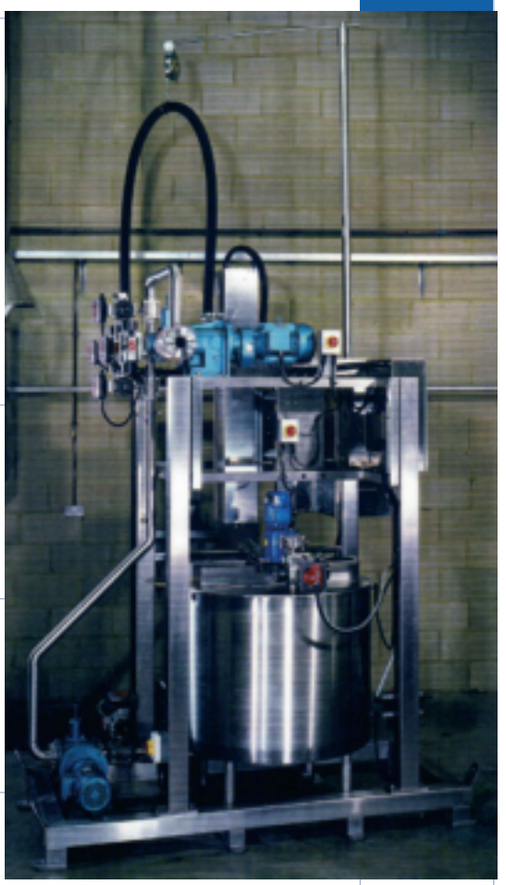
An increasing number of our customers prefer to have a line installed on a turnkey basis. As the filling machine is the heart of the line we believe that not only is it essential that we are able to offer this service, but we are also in the ideal position in which to do so.

Drum Decanting System

A drum is placed onto the weigh scale underneath the lance, pressing the button activates the filling cycle and the lance is then lowered into the drum. A pump removes a predetermined amount of liquid from the drum and passes it through to a blending plant.

The lance exits the drum and enters the lance cleaning tank (rinsing kettle) where it proceeds to clean itself inside and out, ready for use on another product.

- 304 stainless steel construction.
- Rinsing kettle.
- Decanting pump.
- Rinsing pump.
- Rinsing kettle can have an optional weigh sensor on mounting legs.
- Drum platform incorporating roller conveyor, tilting mechanism and weigh scale.



Drum Decanting Unit

Accessories

- Rotary infeed/outfeed tables.
- Induction sealing.
- In-line and rotary feed tables.
- Labelling and coding.
- Elevators.
- Case packing.
- Conveyor systems.
- Palletising.
- Unscrambling systems for containers.
- Shrink wrapping.

Enercon Superseal Mass Induction Sealer

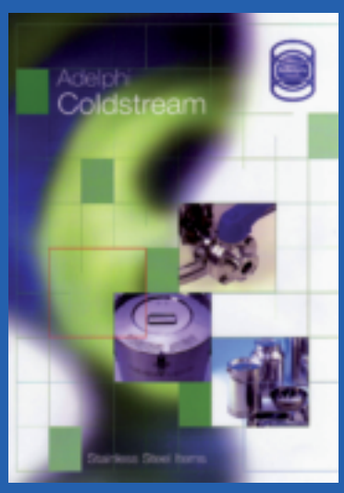
Rotary Feed Table

In-line Feed Table

Servicing & Spares

Our reputation for offering excellent service and sales support has earned us repeat business from our customers worldwide. Masterfil and local engineers are available to commission and service our machines globally.
We also offer a wide range of spares for our machinery.

Other companies in the Adelphi Group include:



Bench top machines filling 0.5ml to 1000ml are available.
See **Adelphi Manufacturing** for further details. www.adelphi.uk.com

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Part of the Adelphi Group of Companies

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